6201

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State of Utah
DEPARTMENT OF NATURAL RESOURCES

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Executive Director

Division of Oil, Gas and Mining

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Division Director

August 26, 2014

David McMullin
C.S. Mining LLC.
P.O. Box 608
Milford, Utah 84751

Subject: Review of Modified Reclamation Cost Estimate, C.S. Mining Inc., Hidden Treasure Mine, M/001/0067, Beaver County, Utah

Dear Mr. McMullin:

The Division has completed a review of the referenced reclamation cost estimate associated with the Hidden Treasure mine, which were received August 11, 2014. The attached comments will need to be addressed before tentative approval of a new reclamation cost amount may be granted.

Please contact Peter Brinton at 801-538-5258 or me at 801-538-5261 if you have questions about this review. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB:pnb:eb
Attachment: Reclamation Cost Calculation Reviews
cc: Ed Ginouves, BLM-Cedar City (UTU-) (eginouve@blm.gov)
P:\GROUPS\MINERALS\WP\M001-Beaver\M0010067-HiddenTreasure\final\REV-6201-08262014.docx

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UTAH DNR OIL, GAS & MINING

REVIEW OF
MODIFIED RECLAMATION COST ESTIMATE

C.S. Mining LLC
Hidden Treasure Mine

M/001/0067
August 26, 2014

General Comments:

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	NOI, page 69a, para 2	Update the reclamation plan to match actual waste dump construction conditions. To the degree that conditions vary, multiple production sheets are needed to characterize the different scenarios. For the waste dump slopes, the reclamation surety calculation method will need to be modified to account for dump construction requiring significant regrading at a steeper slope. Identify how dump slopes will be constructed here or in 106.2 (including approximate dump lift dimensions). Also update the page 79 discussion of cost assumptions for grading dumps.	pnb	

R647-4-113 – Surety

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2	Demolition, Ref. #15	The reference to an oil filled transformer may be for installation, not removal. Check this calculation. A hazardous waste removal cost may be more appropriate.	pnb	
3	Structures Sheet	The volume of the acid storage tanks appears to be calculated in units of cubic feet, not cubic yards as cell F65 indicates. This error results in a significant overestimation of the number of truckloads of acid to be removed at the end of mining. Please correct the calculation.	pnb	
4	Structures Sheet	Solvents and other hazardous liquids used for solution extraction should also be included in the total volume of fluids to be removed.	pnb	
	Earthwork Sheet, Production	Production sheet modifications and additions are needed, as discussed below. Specifically, costs for pushing down dumps to 3H:1V should be calculated using cubic yards per hour and the estimated volume of material to be pushed per dump. Once the needed changes are made to production sheets, update the earthwork costs spreadsheet to incorporate the production sheet calculation information.	pnb	
5	Earthwork Sheet, Production	While not required, it makes sense to split the Grading and Ripping section. Since it requires significant grading, include backfilling and ripping of the flotation pond and grading of the embankment as specific line items.	pnb	
6	Earthwork, Unit Cost	When calculating the unit cost based on rental rates, 176 hours of potential operation per month should be used, rather than the 160 hours.	pnb	
8	Earthwork Sheet	The cost to lay liner over one-half of the ITDF tailings pond area has been miscalculated. The calculated cost is adequate for one-fourth of the ITDF tailings pond area (or 16.4 acres), whereas one-half of the total area would be 32.8 acres. Modify accordingly.	pnb	

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9	Earthwork Sheet	Identify the maximum amount of material needing to be graded down on the SITLA Ore Transfer Station area, and use this amount to calculate the costs, comparable to how the costs to regrade the low grade stockpiles were calculated.	pnb	
10	Earthwork Sheet	Line 75 (the "Push Dry-Stack Tails to Flotation pond area" line item) should be moved from the "Replace Growth Medium..." section to another section, since dry-stack tails are not considered growth medium.	pnb	
11	Earthwork Sheet	The total volume of growth medium to be placed on the tailings to provide a 12-inch cover is about 105,700 cubic yards, not 52,837. It appears that a six inch spreading may have been assumed.	pnb	
12	Earthwork Sheet	Scarification of the ITDF should be included in a Ripping & Scarification section, not in the Replace Growth Medium Over Disturbed Areas section.	pnb	
13	Revegetation	With the exception of revegetation of the ITDF downstream dam and embankment slopes and the ITDF road and ditch slopes, the dozer component of the seed application costs can be assumed to already be included in the ripping costs, since seeding while the dozer is ripping the topsoiled dumps is probable. If such an assumption is made, please make note this in section 113 of the NOI and in the description here.	pnb	
14	Revegetation	The reference reported as being for the 50 hp seeder is actually the cost reference for a sheepsfoot. Flat areas without significant slopes upgradient could be seeded and rolled with a sheepsfoot, but the mechanical seeder would be needed either way. Provide a cost estimate for the mechanical seeder.	pnb	
15	Revegetation	The cost estimate includes applying hay mulch as part of revegetation, but this is not included in the reclamation plan. The Division recommends blowing hay mulch on topsoiled surfaces prior to ripping, but since this is not part of the plan, the cost can be removed from the cost estimate.	pnb	
16	Dozer (Worksheet 5)	The estimated Cat Handbook dozing production rates for a D8 at 150 ft push distance are less than the reported value of 950 LCY/hr. Provide a more realistic estimate for this worksheet and others that may be prepared.	pnb	
17	Dozer – Grading (Worksheet 6)	For regrading of waste rock dumps, calculate production rates in terms of cubic yards per hour using the dozer production sheet (Worksheet 5) and reasonable assumptions. This method will require a reasonable estimate of the volume of rock that will need to be pushed down from angle-of-repose dumps onto the lift or natural surface below to form the continuous 3H:1V slopes discussed in the approved reclamation plan. Provide assumptions, including reasonable dump dimensions prior to regrading (such as the number of dump lifts, typical lift heights, lift offsets/bench widths, etc, as needed to construct the dumps at an overall slope angle of 3H:1V).	pnb	
18	Dozer Grading (Worksheet 6)	Since topsoil will likely be pushed down the slopes from the crest of the graded slope, a separate dozer production sheet (Worksheet 6) should be provided for this activity. The total topsoil volume graded down the slopes will be needed, and should be equal to the total volume of topsoil hauled.	pnb	
19	Dozer – Ripping (Worksheet 7)	Provide the basic assumptions used to estimate the bank volume of material to be ripped.	pnb	
20	Dozer - Ripping (Worksheet 7)	A separate production sheet for ripping of dumps on the contour should be provided, since it is a distinctly different activity than waste rock grading and topsoil replacement.	pnb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
21	Truck (Worksheet 9)	It appears that topsoil (growth medium) to be spread over the processing facilities area may need to be brought in from another area, such as the ITDF stockpile. Please include a separate truck worksheet based on a longer haul distance to the mill area from the ITDF stockpile area.	pnb	